In the Specification

Replace the paragraph located on page 13, line 17 – page 14, line 13, with the following text:

FIG. 3 illustrates formation of a single-electron transistor (SET). Like chem-FETs, SETS can detect the absorption of charged material. The advantages of SETs are, first that the gate is on the length scale of single molecules, and second, that the charge sensitivity is several orders of magnitude greater. In accordance with this approach, illustrated in FIG. 3, a SET 300 is self-assembled by binding a single nanoparticle 330 between two conducting contacts 315, 317. The contacts may, for example, be synthesized carbon nanotubes with modified chemical ends such that the nanoparticle self assembles onto them. Alternatively electrodes may be formed by printing conductive nanoparticles or by conventional photolithographic or other means and then employing electromigration, electroplating or electrofusing under feedback control to realize the nanoscale electrode spacing required for single electron transistor operation. Thus formed, contacts 315, 317 are exposed to a solution of nanoparticles having capping groups and, radiating therefrom (typically as a tangle of minute threads), biomolecules of interest. The interelectrode spacing distance approximates the size of the nanoparticles, so that a single nanoparticle can lodge between the electrodes and bridge them. Reagents affecting the biological material may be directly adsorbed onto (or absorbed into) the nanoparticle, and the effect monitored by operation of the device.